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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Helmut Schiller

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12/03/2002

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EXAMINER

NGUYEN, TRAN N

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 12/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/914,750

Applicant(s)

SCHILLER, HELMUT

Examiner

Tran N. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☐ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### *Specification*

***This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.***

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or  
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a).  
"Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.

- (1) Field of the Invention.
- (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

**1. The specification is objected due to the following:**

On page 6, line20+, the spec. discloses that ends wires of coil winding (34) of successive contact elements (40) constitute contact surface (34) for sliding contacts (42, 50). However, figure 1 shows pictorial reference number (34) is coil winding itself, while contact elements (40) having contact surfaces (44) associate with sliding contacts (42, 50).

On page 7, line 1+, the spec. discloses the carbon brushes are pressed onto engagement with the contact surfaces (44) by spring 48. However, the drawings do not show the spring (48).

***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following must be shown or the feature(s) canceled from the claim(s):

*(1) the two sliding contacts of the commutator associated with a respective radially outwardly situated permanent magnet (28) extends so far in the peripheral direction that*

*they overlap with about half of the contact elements associated with a pole surface of a permanent magnet, as in claim 1;*

*(2) the first and second commutators (18a; 18b) are arranged axially offset from one another, as in claim 1.*

3. The drawings are objected to under 37 CFR 1.83(a) because they fail to *show the carbon brushes are pressed onto engagement with the contact surfaces (44) by spring 48, as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing.* MPEP § 608.02(d).

*To comply with 37 CFR 1.84(p)(5), the applicant is hereby suggested to ensure that the drawing include all reference sign(s) mentioned in the description.*

No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. **Claims 1-7** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Among claims 1-7, the use of the terms “**which**”, “**it**”, “**its**”, “**itself**”, “**they**”, “**their**”, “**these**”, “**those**” does not clearly set reference for the intended referred subject matter. For example, among the uses of these term is the recitation in claim 1 “*the ends of the electrical conductors constituting the coil being electrically conductively connected to respective associated contact elements, **which** together constitute a first commutator (18a), with a respective contact surface, pressed against **which** are sliding contacts, **which** are connectable to at least one direct current source or at least one direct current consumer*”, the term “which” does not clearly set reference, i.e., the term “which” should be referentially understood as, one of the following subject matters: (which refers to) the coil, or the contact elements, or the commutator, or the contact surface, the sliding contacts?

The applicant is strong suggested to clearly establish antecedent basis for the subject matters in the claimed language and refer to the established antecedent basis precisely and consistently by avoiding any use of the above aforementioned terms.

**In claim 1:**

The recitation “*Electrical direct current machine (10) including a rotor (26), which is rotatably mounted in a housing (12) and has a plurality of electromagnets spaced from the axis of rotation with a respective coil winding (34) on a coil core (32) carrying one or more electrical conductors, the ends of the electrical conductors constituting the coil being electrically conductively connected to respective associated contact elements, which together constitute a first commutator (18a), with a respective contact surface, pressed against which are sliding contacts, which are connectable to at least one direct current source or at least one direct current consumer, and including pole surfaces of permanent magnets (28) with alternating*”

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*polarity in the peripheral direction, which are arranged at uniform angular spacings on the inner surface of the housing end walls (14a, 14b) and are opposed to the end surfaces of the coil cores (32)” is indefinite because of the following:*

(1) as mentioned before, the recitation is a very confusing recitation because the term “which” does not clearly set reference, i.e., the term “which” should be referentially understood as, one of the following subject matters: (which refers to) the coil, or the contact elements, or the commutator, or the contact surface, the sliding contacts?

(2) “, and including pole surfaces of permanent magnets (28) with alternating polarity in the peripheral direction, which are arranged at uniform angular spacings on the inner surface of the housing end walls (14a, 14b) and are opposed to the end surfaces of the coil cores (32)” is unclear whether the machine or the rotor including pole surfaces of permanent magnets? if the first is the correct, should it be the machine’s stator structure including pole surfaces of permanent magnets?

**Still in claim 1:**

*“whereby each coil core (32) together with the associated coil winding constitutes a separately manufactured electromagnet unit (30), which is mounted in a hub carrier (38) rotationally fixedly connected to the shaft (24) of the rotor (26), the pole surfaces of the permanent magnets (28) have an extent in the peripheral direction which overlaps with a plurality of opposed coil cores (32) and the two sliding contacts of the commutator associated with a respective radially outwardly situated permanent magnet (28) extends so far in the peripheral direction that they overlap with about half of the contact elements associated with a pole surface of a permanent magnet and whereby provided on each pair of sliding contacts (42)*

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*connected to the direct current source or the direct current consumer, offset in the peripheral direction, there is a further pair of sliding contacts (50) connected in the reverse polarity to the direct current source(s) or direct current consumer and further double pairs of commutator sliding contacts (42; 50), constituting a second commutator (18b), are provided to be connectable to the direct current sources or direct current consumer with successively reversed polarity”*” is indefinite because of the following:

(1) the claimed language previously recites *two sliding contacts* then later recites *each pair of sliding contacts* is confusing because two sliding contact is understood as one single pair of sliding contact while the term “each” in the phrase *each pair of sliding contacts* implies that there are more than one pair of sliding contacts. It is unclear that sliding contact assembly (42) having a plurality of sliding contacts, i.e., brush assembly (42) having a plurality of brushes that make sliding contacts with the contact element (40). Should this be correct, the claimed language must clearly recite such structure.

(2) the phrase: “further pair of sliding contacts (50) connected in the reverse polarity to the direct current source(s) or direct current consumer and further double pairs of commutator sliding contacts (42; 50), constituting a second commutator (18b),” it is so confused because it is not clear how many total pairs of sliding contacts are parts of the first commutator (18a) and how many sliding contacts constitutes a second commutator (18b). Furthermore, it is unclear which of the following is correct:

(a) is it true that in each respective commutator, there are a number of sliding contacts (42) and a number of sliding contacts (50) associate with each respective commutators? Or,



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(b) is it true that sliding contacts (42) associate with first commutator (18a) while sliding contacts (50) associate with second commutator (18b), or vice versa?

**NOTICE:** the terms “contact elements (40)” and “sliding contacts” easily create confusion in the claimed language. According to the spec., “sliding contacts” are actually carbon brushes. The applicant is suggested to use “carbon brushes” instead of “sliding contacts” to avoid being confused with the *contact elements*, which is also known as commutator bars.

Furthermore, since there are two sets of brush assemblies (42 and 50) the applicant is suggested to use first brushes (42) and second brushes (50) to clearly set antecedent basis for the two brush assemblies.

(3) the term “whereby” is indefinite because it has been hold that the functional “whereby” statement does not define any structure and accordingly cannot serve to distinguish. *In re Mason, 114 USPQ 127, 44 CCPA 937 (1957).*

**Still in claim 1:**

*“the first and second commutators (18a; 18b) are so arranged on the rotor shaft (24) in the axial direction of the rotor (26) and axially offset from one another that their contact surfaces (44) associated with the sliding contact (42; 50) are situated, directed radially outwards, on cylindrical envelope surfaces and that the breadth of the sliding contacts (42; 50) measured in the axial direction is so selected that they are pressed simultaneously against the contact surfaces, adjacent in the axial direction, of both commutators (18a; 18b)”* is indefinite because of the following:

(1) in the above recitations the term “so arranged” and “so selected that” is unclear and the phrase is very confusing. The phrase *“the first and second commutators (18a; 18b) are so arranged on the rotor shaft (24) in the axial direction of the rotor (26) and axially offset from one another that their contact surfaces (44) associated with the sliding contact (42; 50)”* is

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unclear, it might be amended for clarification, for example *the first and second commutators (18a; 18b) are arranged on the rotor shaft (24) in the axial direction of the rotor (26) and axially offset from one another so that the contact elements(40) having contact surfaces (44) associated with the sliding contact (42; 50).*

Among claims 2-7, there are several subject matters lack antecedent basis, among them are, for example: “the size of the angular spacing”, as in claim 3, “the mountings”, as in claim 6. Therefore, the applicant is requested to ensure all subject matters in claims 2-7 having clearly established antecedent basis.

The above are but a few specific examples of indefinite and functional or operational language used throughout this claim, and are only intended to illustrate the extensive revision required to overcome the rejection under 35 USC 112, second paragraph. The above-mentioned corrections therefore, are in no way a complete and thorough listing of every indefinite and functional or operational language used throughout this claim. Applicant is required to revise all of the claim completely, and not just correct the indefinite and functional or operational languages mentioned.

No rejection based on prior art is given at this point of prosecution. MPEP 2173.06 states:

*“...where there is a great deal of confusion and uncertainty as to the proper interpretation of the limitations of a claim, it would not be proper to reject such a claim on the basis of prior art. As stated in In re Steele , 305 F.2d 859, 134 USPQ 292 (CCPA 1962), a rejection under 35 U.S.C. 103 should not be based on considerable speculation about the meaning of terms employed in a claim or assumptions that must be made as to the scope of the claims.”*

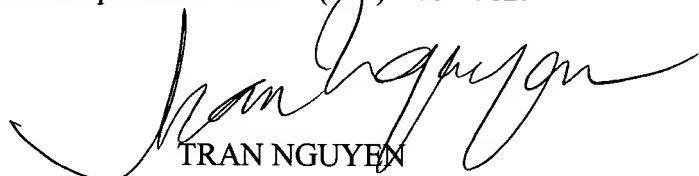
Given the great deal of confusion and uncertainty as to the proper interpretation of the limitations of claims, it would not be proper to reject claims 1-7 on the basis of prior art. Therefore, no rejection based on the prior art is set forth in this Office Action.

***Communication***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N Nguyen whose telephone number is (703) 308-1639. The examiner can normally be reached on M-F 6:00AM-2:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703)-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3431 for regular communications and (703)-395-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-1782.

  
TRAN NGUYEN  
PRIMARY PATENT EXAMINER  
TC-2800